

**WHAT IS CLAIMED IS:**

1                   1.     A miter saw comprising:  
2                   a base;  
3                   an arm assembly having a fixed end pivotally attached to the base, a  
4 free distal end forming a handle spaced outwardly therefrom and a central region  
5 therebetween provided with a rotary spindle supporting a cutting disc;  
6                   wherein the handle has a transverse oriented elongate grip portion  
7 sized for a user's fingers to wrap thereabout and a palm pad portion extending  
8 outwardly from the grip portion for a distance sufficient to underlie the heel portion  
9 of the palm of the user's hand so that as the user lowers the handle towards the base  
10 to cause the cutting disc to engage a work piece, the palm pad portion transmits  
11 downward force from the user's hand to the handle thereby minimizing torque on the  
12 user's wrist.

1                   2. The miter saw of claim 1 wherein the elongate grip portion further  
2 comprises a lock-out switch extending transversely to the left of the grip portion  
3 adjacent the user's thumb and a trigger switch mounted on the grip portion extending  
4 inwardly from the grip portion adjacent a user's index finger.

1                   3. The miter saw of claim 1 wherein the palm pad portion further  
2 comprises a soft elastomeric pad overlying a relatively rigid structural pad member.

1                   4. The miter saw of claim 1 wherein the arm extends along an arm  
2 axis which is generally perpendicular to the rotary spindle when the arm is viewed  
3 in plan view in a lowered position.

1                   5. The miter saw of claim 4 wherein the arm includes a rotatable joint  
2 enabling the orientation of the handle to be varied about the arm axis and fixed at a  
3 position selected by a user.

1                   6. The miter saw of claim 5 wherein the rotatable joint has sufficient  
2 travel to enable the elongate grip portion to be moved between a horizontal position

3 and a position rotated at least 30° counter-clockwise about the arm axis therefrom  
4 measured when the arm is lowered and the rotary spindle is generally horizontal.

1 7. The miter saw of claim 4 wherein the handle has a fore and aft  
2 length measured along the arm axis of between 3" and 4.5".

1 8. The miter saw of claim 7 wherein the handle has a maximum  
2 vertical thickness where the handle is in a lowered horizontal orientation of between  
3 1.5" and 2.5".

1 9. The miter saw of claim 8 wherein the elongate grip portion further  
2 comprises a lock-out switch extending transversely to the left of the grip portion  
3 adjacent the user's thumb and a trigger switch mounted on the grip portion extending  
4 inwardly from the grip portion adjacent a user's index finger.

1 10. A miter saw comprising:  
2 a base; and  
3 an arm assembly having a fixed end pivotally attached to the base, a  
4 free distal end forming a handle spaced outwardly therefrom and a central region  
5 therebetween provided with a rotary spindle supporting a cutting disc, said handle  
6 including a grip portion, connected to said arm central region via a rotatable joint  
7 to permit rotation of said handle about a common pivot axis; said rotatable joint  
8 having a locking mechanism cooperating with the arm central region for permitting  
9 selective handle rotation about said pivot axis and for maintaining a selected  
10 orientation of said handle portion relative to said central region during a cutting  
11 operation of the miter saw.

1 11. The miter saw of claim 10 wherein the handle is rotatably  
2 adjustable between at least 0° and 30° from horizontal measured when the arm is  
3 lowered and the rotary spindle is horizontal.

1 12. The miter saw of claim 10 wherein the locking mechanism  
2 comprises an elongate bolt spanning the rotatable joint between the handle and the

3 arm, and a user engagable locking handle cooperating with the bolt to axially clamp  
4 the handle and arm together at a user selected orientation.

1 13. A miter saw comprising:  
2 a base; and  
3 an arm assembly having a fixed end pivotally attached to the base, a  
4 free distal end forming a handle spaced outwardly therefrom, a central region  
5 therebetween provided with a rotary spindle supporting a cutting disc; said handle  
6 being connected to said central region via a rotatable joint to permit the rotation of  
7 said handle, about a longitudinal axis therethrough;  
8 wherein the locking mechanism comprises an elongate bolt spanning  
9 the rotatable joint between the handle and the arm, and a user engagable locking  
10 handle cooperating with the bolt to axially clamp the handle and arm together at a  
11 user selected orientation.

1 14. The miter saw of claim 13 wherein said rotatable joint comprising  
2 indicia and a corresponding alignment configuration to provide a visual indication  
3 to the amount of handle rotation of said second handle portion about said central  
4 longitudinal axis.

1 15. The miter saw of claim 13 wherein the handle is provided with  
2 palm pad portion having comprises a soft elastomeric pad overlying a relatively rigid  
3 structural member.

1 16. The miter saw of claim 13 wherein the handle has a maximum  
2 vertical thickness when the handle is in a lowered horizontal orientation of between  
3 1.5" and 2.5".

1 17. The miter saw of claim 13 wherein the handle has a fore and aft  
2 length measured along the arm axis of between 3" and 4.5".

1                    18. The miter saw of claim 17 wherein the handle has a maximum  
2 vertical thickness where the handle is in a lowered horizontal orientation of between  
3 1.5" and 2.5".

1                    19. The miter saw of claim 10 wherein the pivotal attachment of the  
2 arm to the base is adjustable about a vertical and a horizontal axis in order to enable  
3 a user to make a compound miter cut.

1                    20. The miter saw of claim 19 wherein the handle is rotatable to the  
2 same extent that the arm is adjustable about the horizontal axis so as to enable the  
3 handle to be maintained in a horizontal orientation during a compound miter cut.